

**MOBILE MILITARY SATELLITE RECEIVER ARCHITECTURE
FOR ACCOMMODATING WIDE CARRIER OFFSET
AND METHOD OF PERFORMING COARSE CARRIER OFFSET ADJUSTMENT**

ABSTRACT OF THE DISCLOSURE

A coarse carrier offset adapter for determining a coarse carrier offset for application to a received satellite signal, a method of performing coarse carrier offset adjustment and a time division multiplexing (TDM) satellite receiver. In one embodiment, the adapter includes: (1) an energy estimator configured to analyze, with respect to the received satellite signal, energies in bands on either side of a baseband as displaced by a coarse carrier offset and (2) an offset adapter coupled to the energy estimator and configured to change the coarse carrier offset until the energies become substantially equal and provide the coarse carrier offset to a digital down converter for the application.